

individual are at the same stage of development. Gastrulation was not observed in the living material, but sections show a stage in which central cells lie clearly marked off from a surrounding ring of smaller surface-cells, and the probability is that these endodermal cells were formed by delamination. When the spherical mass is beginning to elongate into the ellipsoidal form of the planula a large migration of cells from the surface into the centre takes place, not limited to one pole. The relation of the central cells earlier seen and of these in-wandering cells to the definitive endoderm was not made out. The young are set free from the parent as ciliated planulæ, having pigment spots on the posterior end. The planulæ swim about actively on the surface for a day or two, their motion being both translation and rotation. Then they gradually lose the forward motion and rotate on their own axis in one spot. At this point they settle down and the pigment spots which were on the posterior surface are found to migrate into the interior. In a day or two they bud out two tentacles, and shortly afterwards two more, though young hydras with three and five tentacles were by no means uncommon. In this condition they lived for three weeks in the aquaria without undergoing further development.

Search for scyphistomas in the region where the jellyfish were found was fruitless. The youngest specimens taken in the tow were of practically the adult structure, so that the important intermediate stages remain unknown. The youngest jellyfish were interesting, however, in that only the middle tentacle in each group was developed, and that the sensory clubs were situated almost on the margin, and were not yet enclosed in niches.

VII.—*On new Mammals from Western Mexico and Lower California.* By OLDFIELD THOMAS.

THE British Museum has received from Mr. W. W. Price two collections of mammals—one from Sinaloa, W. Mexico, obtained by Mr. P. O. Simons, and the other from the Cape region of Lower California, collected by Mr. D. Coolidge.

In the former collection occur the remarkable pigmy skunk with uninterrupted dorsal lines (*Spilogale pygmaea**) exhibited recently at the Zoological Society, and the jaguarondi described below. The remainder of the collection consists mainly of

* Diagnosed in Abstract of Meeting of Nov. 30. Published Dec. 1, 1897.

forms obtained by Dr. Buller in Jalisco and worked out by Dr. Allen.

The Lower-Californian collection proves to be of unexpected interest, and contains the *Dasypterus ega xanthinus* and *Oryzomys peninsulæ* described in the last number of the 'Annals,' the badger (*Taxidea taxus infusca* *) brought by myself and the peninsular mule-deer (*Mazama hemionus peninsulæ* *) by Mr. Lydekker before the Zoological Society, and, finally, the species and subspecies described in the present communication.

There is also a *Natalus*, apparently inseparable from *N. stramineus*, the first record of this tropical genus in Lower California. The other bats appear to be ordinary Californian species.

Felis yaguarondi tolteca, subsp. n.

Colour, instead of the blackish grey varied by erythrisms towards red of the typical form, pale grizzled fawn throughout, greyer on the head, fore neck, and limbs, clearer fawn posteriorly and on the tail, which above is grizzled fawn, and below unmixed fawn or rufous fawn. Under surface soiled whitish fawn, the underfur brownish grey, the longer hairs tipped with dull whitish.

Skull, while of equal breadth, much shorter and more stoutly built than in *typica*; crown higher and more convex, zygomata more massive, posterior narial fossa decidedly broader, bullæ lower. Ramus of lower jaw shorter and stouter.

Dimensions of the type (an old male, measured in the flesh):—

Head and body 570 millim.; tail 460; hind foot 138; ear 37.

Skull: basal length 84, basilar length of Hensel 82; greatest breadth 64; least interorbital breadth 18; intertemporal breadth 33·5; breadth of brain-case above auditory meatus 43; palate, length from henselion to posterior edge, excluding median notch, 36; breadth between outer corners of carnassials 38·7; breadth of posterior narial fossa 14; front of canine to back of carnassial 28·7; length of upper carnassial 11·3, of lower carnassial 9.

Hab. Tatemales, Sinaloa. Coll. P. O. Simons.

Type collected 16th June, 1897. Original number 513.

The above comparisons have been made with specimens

* Diagnosed in Abstract of Meeting of Nov. 30. Published Dec. 1, 1897.

from Southern Brazil, near the typical locality, Paraguay. But Veraguan and Guatemalan skins, like the S.-American ones, are blackish or rufous, without any of the peculiar fawny tone of *F. y. tolteca*.

This cat is perhaps that referred to by Baird* and Allen † as *F. yaguarondi*. The former of these authors had for examination only a skull, the latter two hunter's skins, without particulars, but probably from Jalisco.

Elliot ‡ places in his synonymy of *F. yaguarondi* "*F. calomitti*, Baird, Mamm. N. Amer. t. 74. fig. 2 (skull)"; but this name is not on the plate, and the nearest I can find to it is Baird's "*Felis cacomitl*, Berl. MSS.," in the synonymy of *F. yaguarondi*, a reference which will certainly not give a status to the name, although, as already said, the skull figured is probably that of this form of the jaguarondi.

Felis mexicana, Desm., does not appear to belong to the present animal, as it is too large; but the name is in any case antedated by Turton's *F. mexicana*, which is one of the spotted tiger-cats.

Lynx rufus peninsularis, subsp. n.

Distinguished from other N.-American lynxes by its very small size (see cranial measurements below).

General colour of back pale rufous, tipped with grey, a few of the median dorsal hairs black-tipped, but there is no trace of longitudinal dark lines or markings, so that the colouring does not agree with that of Mearns's *L. rufus californicus*. Belly white, with black spots. Markings on face and ears apparently very much as in specimens from California proper, the black spot on the upper lip almost obsolete; the whitish patch on the back of the ear not extending to the anterior border.

Skull conspicuously different from that of any of the Mexican or Californian lynxes by its much smaller size, lesser development of the frontal convexity, and smaller, narrower brain-case.

Dimensions of the type (an adult male, measured in flesh):—

Head and body 607 millim.; tail 154; hind foot (*more Americano*) 160; ear 81.

Skull: basal length (basion to gnathion) 91.6; greatest breadth 76.5; nasals, length in middle line 23.5; interorbital

* Mamm. N. A. p. 88, and Rept. U.S. Boundary Comm. p. 12, pl. lxxiv. fig. 1 (skull) (1859).

† Bull. Am. Mus. N. H. iii. p. 176 (1890).

‡ Mon. Felidæ, text to pl. xiii.

breadth 21·5; breadth across postorbital processes 50; intertemporal breadth 38; breadth of brain-case on squamosals 51; greatest mastoid breadth 50; palate, length from gnathion 43, breadth between outer corners of carnassials 45; length of upper carnassial 13·4, of lower carnassial 11.

Hab. Santa Anita, Lower California. Coll. F. Pazik.

Type obtained June 21, 1896. Original number 432. Two specimens examined.

This animal is no doubt a pauperized peninsular race of the Californian lynx, from which it may be readily distinguished by its much smaller skull.

In the descriptions of Mearns's *Lynx rufus eremicus* and *L. r. californicus* no cranial measurements are given, but such external measurements as are supplied seem to indicate that these animals are about as large as the Californian and Mexican examples in the Museum collection, and no mention is made of their size being in any way inferior to that of the ordinary *L. rufus*.

Vespertilio fuscus peninsule, subsp. n.

Size small, about as in *propinquus* and *bahamensis*, decidedly smaller than in *typicus*. Dorsal fur 8-9 millim. in length. Colours pale, more as in the northern forms; general colour of back fawny brown, more fawn on head and fore back, browner (but still very pale) posteriorly; the basal halves of the hairs slaty black, the tips fawn.

Skull apparently very similar to that of *V. f. bahamensis*, both in size and shape, therefore far smaller than in *fuscus* and *miradorensis* (see measurements).

Dimensions of the type (an adult male, measured in flesh by collector):—

Forearm 43 millim. (range 40-44).

Head and body 61; tail 34; ear 14.

Skull: basal length 14·2; occipito-gnathic length * 16·5; greatest breadth 11·7; interorbital breadth 6·3; intertemporal breadth 3·8; front of canine to back of *m.*³ 6·2, the same below 6·7.

Hab. Sierra Laguna, Lower California. Coll. D. Coolidge.

Type collected July 7, 1896. Original number 385. Four specimens examined.

This little race of the United States "brown bat" is readily recognizable by its small size and pale colour. It will

* Mr. Miller, in his recent monograph, speaks of "occipito-nasal" length without explaining how it is taken. It is apparently to the front of the premaxillæ or "gnathion," and is so taken here.

be a matter of much interest to see whether it merges insensibly into the Californian bat, or is replaced abruptly by the latter in the northern parts of the peninsula. In the former case it would probably have to be considered as an independent southern modification of subsp. *typicus*, and in the latter, like *Dasypterus ega vanthinus* and *Natalus stramineus*, as a direct invader of the tropical part of the peninsula by one of the Central-American forms.

Peromyscus eva, sp. n.

A small rufous species with a long tail, in general appearance almost more like a *Reithrodontomys* or a small *Oryzomys* than a *Peromyscus*.

Size rather small. Fur close and straight. General colour sandy rufous, the head and fore back more greyish, the rump more rufous. Back lined with brown, but not conspicuously so; sides gradually becoming clearer rufous, which attains its brightest at its junction with the white of the belly. Under surface white, the slaty bases of the hairs showing through. Face greyish, with but slight tinge of rufous; a narrow dark line round the eye. Ears very large, very thinly haired, pale brownish, not conspicuously darker in colour than the head. Upper surface of hands and feet silvery whitish, not snowy white, the ankles rather duskier. Tail very long, much longer than head and body, very thinly haired, not pencilled, dull brown above, little or not lighter below, never conspicuously bicolor.

Skull with a broad low brain-case; supraorbital edges square, but not beaded. Palatal foramina reaching just to the level of the front edge of *m*.¹.

Dimensions of the type (an adult male, measured in the flesh):—

Head and body 88 millim.; tail 108*; hind foot 21; ear 17.

Skull: basal length 20·3; basilar length 18·8; greatest breadth 12·8; nasals, length 9·6; interorbital breadth 4; interparietal 3·7 × 9; breadth of brain-case on squamosals 11·7; palate length from henselion 10; diastema 6·6; palatal foramina 4·8 × 2·1; upper molar series 3·6.

Hab. San José del Cabo, Lower California. Coll. D. Coolidge.

Type collected July 29, 1896. Original number 525. Thirty-nine specimens examined, of which twenty-three are from Santa Anita, five from Sierra Laguna, and eleven from San José del Cabo.

* Range up to 128.

This pretty little mouse is quite different from any North-American species known to me. Its relationship appears on the whole to be with the *P. aztecus* group, of which it may be a diminutive peninsular representative*. Its small size, rufous colour, and long, thinly haired, and almost unicolor tail separate it widely from any Californian species hitherto described.

Peromyscus leucopus Coolidgei, subsp. n.

One of the pallid forms of this species. General colour above *exactly* matching that of specimens from Loveland, Colorado, assigned by Mr. G. S. Miller, their donor, to *P. l. nebrascensis*, Mearns; therefore by no means corresponding to the description of *P. l. Thurberi*, Allen †, from the San Pedro Martir Range, which is said to be "strongly varied with black, the prevailing tint being often decidedly blackish." Anterior part of outer surface of ear scarcely darker than back. Under surface sharply defined white, the slaty bases of the hairs showing through. Posterior part of sole and tail rather thinly haired for this group, the latter scarcely pencilled, its dorsal surface brown, the scales showing through; very different to the heavily haired and pencilled tail with black dorsal surface of *nebrascensis*.

Dimensions of the type (an adult female, measured in the flesh):—

Head and body 91 millim.; tail 76; hind foot, with claws, 22; ear 20.

Skull (imperfect behind): basilar length (c.) 19.5 ‡; greatest breadth 13; length of nasals 9.5; diastema 6.6; length of upper molar series 3.7.

Hab. Santa Anita, Cape Region of Lower California. Coll. D. Coolidge.

Type collected May 21, 1896. Original number 54. Four specimens examined.

Lepus californicus Xanti, subsp. n.

Similar to the typical form in most respects, but distinguished by its greyer ears and smaller size. General colour almost exactly as in pale examples of *typicus*, except that the cinnamon tinging of the belly is stronger. Ears greyer, with less suffusion of buffy or yellowish, the hairs on the inner

* Specimens of it were referred by Dr. Coues to *P. aztecus* in his monograph (Mon. N. Am. Rod. pp. 101, 102), but at that date no Mexican specimens were available for comparison.

† Bull. Am. Mus. N. H. v. p. 185 (1893).

‡ In a perfect specimen this dimension is 19.6.

surface white, and those on the anterior fringe white with some black ones intermixed; in *typicus* both are more or less yellow. Nape dark smoky grey, sometimes, as in the La Paz specimen, black.

Skull conspicuously smaller than in *typicus*, but otherwise generally similar. Supraorbital ledges weaker, the postorbital processes not or barely touching the skull posteriorly, not anchylosed with it.

Dimensions of the type (an adult female measured in flesh):—

Head and body 477 millim.; tail 63; hind foot, with claws, 120; ear from notch 125.

Skull: greatest length 88; basilar length 69; greatest breadth 41; nasals, diagonal length 38, greatest breadth 17.6; interorbital breadth, with ledges 22.6, without ledges 16.7; intertemporal breadth 13.3; diastema 24.5; palatal foramina 22.5 × 9.2. Breadth of palatal bridge 6. Molar series (sockets) 14.7.

Hab. Santa Anita, Lower California. Coll. D. Coolidge.

Type obtained June 3, 1896. Original number 168.

This hare is, of course, that obtained by John Xantus at Cape St. Lucas in 1859 and 1860, and mentioned by Dr. Allen in his famous monograph of the Leporidae*. I have therefore associated with it the name of its original finder, whose important collections were the first ever made in Lower California, but who has lost the credit for many of his discoveries owing to the "lumping" tendencies of the time at which the specimens arrived in Washington.

The small size of this hare, noticed by Dr. Allen, and its much greyer ears are amply sufficient for distinguishing it subspecifically from the true *Lepus californicus*. Gray's *Lepus Bennettii*, from San Diego, Cal., is smaller than the type of *L. californicus*, but is nevertheless much nearer to the latter than to the present form.

Bryant's *Lepus insularis* †, from Espiritu Santo Island, is possibly a black insular offshoot of the present hare, but seems locally constant enough to indicate subspecific distinction between the two.

With *Lepus martirensis*, Stowell ‡, the Cape region hare seems to have no special relation.

Besides six specimens from Santa Anita and S. José del Cabo, obtained by Mr. Coolidge, the Museum contains an example of this same hare collected by Mr. A. Forrer at La Paz in 1880.

* Mon. N. Am. Rod. p. 358 (1877).

† P. Cal. Acad. iii. p. 92 (1891). (Syn. *L. Edwardsi*, St. Loup, 1895.)

‡ P. Cal. Acad. v. p. 51 (1895).